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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,319	03/03/2004	Gopalakrishnan G. Juttu	STC-03-0009	4366

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EXAMINER
DANG, THUAN D

ART UNIT 1764
PAPER NUMBER

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/792,319

Applicant(s)

JUTTU ET AL.

Examiner

Thuan D. Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-36 is/are pending in the application.
- 4a) Of the above claim(s) 15-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The ratio of silicon to gallium atomic ratio recited in claims 2 and 3 are inconsistent since in claim 2, the ratio is greater than 5, in claim 3 which depends on claim 2, the same is from 5-400.

Regarding claim 2, it is unclear on which the weight amount of platinum is based.

Regarding claim 14, it is unclear if the zeolite of the catalyst is a sodium form. In other words, it is unclear if the catalyst uses a sodium form of the zeolite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 and 8-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Chu (4,891,463) in view of Bernard et al (4,416,806).

Chu discloses a process of aromatization of paraffins having 2-12 carbons to aromatics in the presence of a zeolite containing zeolitic gallium having a structure of ZSM-5 zeolite (the abstract; col. 2, lines 32-42).

Chu does not disclose that the catalyst is treated with hydrogen and sulfur. However, Bernard discloses an aromatization catalyst is treated with sulfur and reduced with hydrogen (the abstract; col. 3, lines 30-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Chu process by treating the catalyst with hydrogen and sulfur to arrive at the applicants' claimed process since Bernard discloses that the catalyst possess exceptional aromatizing properties and excellent stability (col. 3, lines 35-40).

The limitation of the claims 2-4 can be found on column 2, lines 38-42.

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Chu discloses that the catalyst may contain a metal such as platinum (col. 3, line 52).

Chu does not disclose anything else as essential components other than these metals such as platinum in the catalyst (see the entire patent for details).

Chu does not disclose how much the platinum is present in the catalyst. However, the amount of this catalytic component must obviously be selected since it is expected that any amount of platinum would yield similar results.

The condition of the process as called for in claims 8-10 can be found on column 9, lines 53-68.

The form of the zeolite of Chu is a ZSM-5 (example 1).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu (4,891,463) in view of Bernard et al (4,416,806) in consideration with the admitted prior art disclosed in the specification.

Chu discloses a process as discussed above.

Chu discloses on column 3, lines 3-5 that the as-synthesized molecular sieve can contain alkali metal. Further, as admitted by applicants on page 8 of the specification:

“According to the IUPAC recommendations, an example of the sodium form of the zeolite catalyst would be represented as:



where $x=0.1-25$; $y=60-100$; and $z=0.1-10$.”.

Such a sodium form of gallosilicate is well-known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have

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modified the Chu process by using this well-known zeolite as the gallosilicate for the Chu catalyst to arrive at the applicants' claimed process since it is expected that using any form of gallosilicate to prepare the catalyst for Chu's process would yield similar results.

Response to Amendment

The Declaration under 37 CFR 1.132 filed 2/17/2006 is insufficient to overcome the rejection of claims 1-14 and 37 based upon Desmond et al (4,766,265) as set forth in the last Office action because the rejection of Desmond et al is replaced by newly applied prior art Chu (4,891,463).

Response to Arguments

Applicant's arguments with respect to claims 1-14 and 37 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

10792319.20060227

A handwritten signature in black ink, appearing to read 'Thuan D. Dang', with a stylized, sweeping flourish extending from the end of the name.